CLAIMS

1. A colorless and transparent thermosetting polyimidesilicone resin comprising structural units of the following general formula (1) and structural units of the general formula (4), said resin being soluble in an organic solvent

$$\begin{array}{c|c}
O & O \\
\parallel & \parallel \\
C & C \\
N - Y - \\
0 & O
\end{array}$$
(1)

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wherein X is a tetravalent organic group having 4 or more carbon atoms,

none of the carbon atoms of X being bound to a plurality of carbonyl
groups, and Y is a diamine residue of the general formula (2) or (3),

$$\begin{array}{c|c} & \text{OH} & \text{OH} \\ \hline \\ R^1 & \text{CH}_2 & \hline \\ \hline \\ R^2 & R^3 & R^4 & R^5 \end{array} \tag{2}$$

wherein each of R¹, R², R³, R⁴, R⁵ and R⁶ is independently selected

from the group consisting of a hydrogen atom and alkyl groups having

to 6 carbon atoms,

wherein each of R⁷ and R⁸ is independently selected from the group consisting of a hydrogen atom and alkyl groups having 1 to 6 carbon atoms;

$$\begin{array}{c|c}
 & O \\
 & C \\
 & C \\
 & C \\
 & C \\
 & O \\$$

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wherein X is a tetravalent organic group having 4 or more carbon atoms, none of the carbon atoms of X being bound to a plurality of carbonyl groups, and Z is a diamine residue of the general formula (5),

$$-CH_{2}CH_{2}CH_{2}-S_{1}^{9}-\left(0-S_{1}^{11}\right)_{a}CH_{2}CH_{2}CH_{2}-(5)$$

wherein each of R^9 , R^{10} , R^{11} , and R^{12} is independently selected from

the group consisting of substituted or unsubstituted monovalent hydrocarbon groups having 1 to 8 carbon atoms, and "a" is an integer of from 1 to 100.

2. The polyimidesilicone resin according to claim 1, wherein an amount of the diamine residue of the general formula (2) or (3) ranges from 5 mole % to 95 mole % and an amount of the diamine residue of the general formula (5) ranges from 5 mole % to 95 mole %, based on the total amount of the diamine residues.

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3. The polyimidesilicone resin according to claim 1 or 2, wherein the resin has a transmittance of 80 % or higher in the wavelength region of from 400 nm to 700 nm, measured in a form of a film of 10 μ m thickness on a glass substrate of 1 mm thickness.

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4. A semiconductor device or a display apparatus which comprises polyimidesilicone resin according to any one of claims 1 to 3 is used.